

DAHLGREN, VA 22448-5110

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PAPER NUMBER

| L | APPLICATION NO.          | FILING DATE                  | FIRST NAMED INVENTOR | ATTORNEY DUCKET NO. | CONFIRMATION NO. |  |
|---|--------------------------|------------------------------|----------------------|---------------------|------------------|--|
|   | 09/853,925               | 05/09/2001                   | Tak Kin Chu          | 82528               | 7226             |  |
|   | 7                        | 7590 04/21/2003              |                      |                     |                  |  |
|   | OFFICE OF O              | COUNSEL                      | EXAMINER             |                     |                  |  |
|   | NAVAL SURF<br>DAHLGREN I | FACE WARFARE CEN<br>DIVISION | NTER                 | PHAM, TH            | PHAM, THANHHA S  |  |
|   | 17320 DAHLG              | JEN ROAD                     |                      |                     | <del></del>      |  |

ART UNIT

DATE MAILED: 04/21/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

|   |  |   | am     |  |  |  |  |
|---|--|---|--------|--|--|--|--|
| ,   | Application No.                                      | Applicant(s)  |        |  |  |  |  |
| · * *   | 09/853,925   | CHU ET AL.  |        |  |  |  |  |
| Office Action Summary   | Examiner   | Art Unit  |        |  |  |  |  |
|   | Thanhha Pham   | 2813  |        |  |  |  |  |
| Th MAILING DATE of this communication ap  | ppears on the cover                                  | sheet with the correspondence a   | ddress |  |  |  |  |
| Period for Reply  A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.  - Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.  - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).  - Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).  Status |  |   |        |  |  |  |  |
| 1) Responsive to communication(s) filed on 13   | <u> 3 January 2003</u> .                             |   |        |  |  |  |  |
| 2a) ☐ This action is <b>FINAL</b> . 2b) ☑ T   | This action is non-fir                               | al.   |        |  |  |  |  |
| 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under <i>Ex parte Quayle</i> , 1935 C.D. 11, 453 O.G. 213. <b>Disposition of Claims</b>   |  |   |        |  |  |  |  |
| 4) Claim(s) <u>15-21 and 29-36</u> is/are pending in t  | the application.                                     |   |        |  |  |  |  |
| 4a) Of the above claim(s) is/are withdra  | awn from considera                                   | tion.   |        |  |  |  |  |
| 5) Claim(s) is/are allowed.   | •  |   |        |  |  |  |  |
| 6)⊠ Claim(s) <u>15-21 and 29-36</u> is/are rejected.  | 6)⊠ Claim(s) <u>15-21 and 29-36</u> is/are rejected. |   |        |  |  |  |  |
| 7) Claim(s) is/are objected to.   |  |   |        |  |  |  |  |
| 8) Claim(s) are subject to restriction and  | or election requirer                                 | nent.   |        |  |  |  |  |
| Application Papers  |  |   |        |  |  |  |  |
| 9) The specification is objected to by the Examiner.  |  |   |        |  |  |  |  |
| 10) The drawing(s) filed on is/are: a) accepted or b) dispected to by the Examiner.   |  |   |        |  |  |  |  |
| Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).   |  |   |        |  |  |  |  |
| 11) ☐ The proposed drawing correction filed on is: a) ☐ approved b) ☐ disapproved by the Examiner.  |  |   |        |  |  |  |  |
| If approved, corrected drawings are required in reply to this Office action.  |  |   |        |  |  |  |  |
| 12) The oath or declaration is objected to by the Examiner.   |  |   |        |  |  |  |  |
| Priority under 35 U.S.C. §§ 119 and 120   |  |   |        |  |  |  |  |
| 13) Acknowledgment is made of a claim for forei   | ign priority under 35                                | U.S.C. § 119(a)-(d) or (f).   |        |  |  |  |  |
| a) All b) Some * c) None of:  |  |   |        |  |  |  |  |
| 1. Certified copies of the priority docume  |  |   |        |  |  |  |  |
| 2. Certified copies of the priority docume  |  |   |        |  |  |  |  |
| <ul> <li>3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).</li> <li>* See the attached detailed Office action for a list of the certified copies not received.</li> </ul>   |  |   |        |  |  |  |  |
| 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  |  |   |        |  |  |  |  |
| a) ☐ The translation of the foreign language provisional application has been received.  15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.   |  |   |        |  |  |  |  |
| Attachment(s)   |  |   |        |  |  |  |  |
| 1) Notice of References Cited (PTO-892) 2) Notice of Draftsperson's Patent Drawing Review (PTO-948) 3) Information Disclosure Statement(s) (PTO-1449) Paper No(s)   | 4)   | Interview Summary (PTO-413) Paper Notice of Informal Patent Application (FO) Other: |        |  |  |  |  |



Application/Control Number: 09/853,925

Art Unit: 2813

## **DETAILED ACTION**

## Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

1. Claims 15-21 and 29-36 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

In claim 29, "forming, on a surface of a substrate material, a barrier film comprising a monolayer of metal atoms, said metal atoms being selected from the group consisting of barium, strontium and cesium atoms, singly or in combination thereof" renders the claim indefinite. The specification, while being enabling for "forming a monolayer of metal atoms of barium atoms" (see specification page 12 lines 9-22, page 13 and page 14 lines 1-16), does not reasonably provide enablement for forming a barrier film comprising a monolayer of metal atoms in a combination thereof of barium, strontium and cesium atoms.

## Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thanhha Pham whose telephone number is (703) 308-

Page 3

6172. The examiner can normally be reached on Monday-Thursday 8:00 AM - 7:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carl Whitehead Jr., can be reached on (703) 308-4940. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-3432 for regular communications and (703) 308-7725 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

Thanhha Pham April 14, 2003

**TECHNOLOGY CENTER 2800**